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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,539	07/22/2003	Rie Ishii	116567	4892

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EXAMINER
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KUGEL, TIMOTHY J

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/623,539

Applicant(s)

ISHII ET AL.

Examiner

Timothy J. Kugel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 16 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-18 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**DETAILED ACTION**

1. Claims 1-18 are pending as filed 22 July 2003.

***Election/Restrictions***

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-15 and 17 to a polymer gel composition, classified in class 252, subclass 582.
  - II. Claims 16 and 18 drawn to an optical device, classified in class 359, subclass 196.

The inventions are distinct, each from the other because of the following reasons:

3. Inventions I and II are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as an optical composition without the additional substrate layer(s) and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

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4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Philip Caramanica on 28 April 2005 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-15 and 17. Affirmation of this election must be made by applicant in replying to this Office action. Claims 16 and 18 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

#### ***Priority***

7. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Drawings***

8. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Reference character 12 in Figure 2 is not described in the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37

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CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

For the purpose of examination, reference character 12 in Figure 2 was construed to have the same meaning as reference character 12 in Figure 1—A resin matrix material.

### ***Specification***

9. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

10. The disclosure is objected to because of the following informalities:

The acronym IPN should be defined at its first appearance in the specification and in the claims (Page 6 ¶5 and Claim 11). For the purpose of examination, the acronym IPN was construed to mean interpenetrating network.

The word 'keton' should be 'ketone' (Page 26 ¶3).

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The acronym THF should be defined at its first appearance (Page 26 ¶3). For the purpose of examination, the acronym THF was construed to mean tetrahydrofuran.

The acronym ITO should be defined at its first appearance (Page 35 ¶4).

The acronyms LED and EL should be defined at their first appearance (Page 37 ¶1).

The term 'N.N-dimethylacrylamide' should be 'N,N-dimethylacrylamide' (Example 1 Page 37 ¶3).

Appropriate correction is required.

#### ***Claim Interpretation***

11. The term '(meth)acrylamide' has been construed to mean acrylamide and/or methacrylamide; similarly, the term '(meth)acrylate' has been construed to mean acrylate and/or methacrylate.

#### ***Claim Rejections - 35 USC § 102***

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 6,287,485 (Akashi et al).

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Akashi et al. teach a polymer gel capable of swelling-contracting by absorbing-desorbing a liquid when a stimulus—such as the application of heat—is given (Column 3 Line 64 – Column 4 Line 14 and Column 4 Lines 56-66) comprising a crosslinked and/or interpenetrating network of polymers of (a) a (meth)acrylamide or mono-substituted (meth)acrylamide and (b) a monomer other than (a) comprising a mono- or di-substituted (meth)acrylamide or a vinyl-type monomer (Column 5 Line 52 – Column 7 Line 28), a swelling liquid which can include alcohols, propylene carbonate, and or an acid (Column 10 Lines 52-67 and Column 15 Lines 13-20) and a light-modulating material (Column 8 Lines 7-22).

14. Claims 1-5, 11, 12 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 4,891,119 (Ogawa et al.).

Ogawa et al. teach a polyacrylamide gel comprising acrylamide, N-methylacrylamide, and N,N-dimethylacrylamide—as exemplified by applicant—independently and in combination (Abstract, Column 1 Lines 7-11 and Column 2 Lines 63-68), crosslinked with N,N'-methylenebisacrylamide as exemplified by applicant (Column 3 Lines 4-25), in an aqueous medium wherein the water-soluble polymer is dispersed within the three dimensional crosslinked polymer structure (Column 4 Lines 48-60).

Since Ogawa et al. teach the same composition as claimed, one of ordinary skill in the art at the time the invention was made would have expected that the swelling response to temperature of the Ogawa et al. composition would inherently be the same as claimed.

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15. Claims 1-3, 7, 8, 14 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent Application Publication 2003/0012934 (Kawahara et al.)

Kawahara et al. teach a polymer gel composition (¶0002) comprising a crosslinked polymer of (a) (meth)acrylamide or a di-substituted derivative of (meth)acrylamide and (b) a monomer other than (a) comprising (meth)acrylamide, di-substituted derivatives of (meth)acrylamide and monomers with vinyl functionality (¶0039), a liquid—including water soluble organic liquids and alcohols (¶0075) and a light-modulating material (¶¶0056 and 0057).

Since Kawahara et al. teach the same composition as claimed, one of ordinary skill in the art at the time the invention was made would have expected that the swelling response to temperature of the Kawahara et al. composition would inherently be the same as claimed.

The applied reference has a common assignee and at least one common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

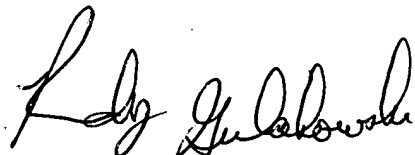
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**Conclusion**

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Kugel whose telephone number is (571) 272-1460. The examiner can normally be reached on 6:30 AM - 3:30 PM Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

17. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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